

REMARKS**Summary of the Office Action**

Claims 1, 2, 4-5, 9, 10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eguchi (US, 5,514,426) in view of Hasegawa et al. (US, 6,614,4910).

Claims 6, 15-17 and 19 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eguchi and Hasegawa et al. as applied to claims 1, 2, 4-5, 9, 10 and 12, and further in view of Nagae et al. (US, 5,618,592).

Claims 3, 11 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eguchi, Hasegawa et al., and Nagae et al., as applied to claims 1, 2, 4-6, 9-10, 12, 15-17, and 19 and further in view of Son et al. (US, 5,545,738).

Claims 7-8, 13-14 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eguchi, Hasegawa et al., and Nagae et al., as applied to claims 1, 2, 4-6, 9-10, 12, 15-17 and 19, and further in view of Kanbe et al. (US, 4,709,994).

Summary of the Response to the Office Action

Applicants amend independent claim 1 by incorporating the features of dependent claim 3, amend independent claim 9 by incorporating the features of dependent claim 11, amend independent claim 15 by incorporating the features of dependent claim 18, and amend independent claim 16 by incorporating the features of dependent claim 18 to further define the invention. Furthermore, Applicants cancel dependent claims 2, 3, 10, 11, 17, and 18 without

prejudice or disclaimer. Accordingly, claims 1, 4-9, 12-16, 19-20 are currently pending for consideration.

All Claims Define Allowable Subject Matter

Claims 1, 2, 4-5, 9, 10 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eguchi (US, 5,514,426) in view of Hasegawa et al., claims 6, 15-17 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eguchi and Hasegawa et al. as applied to claims, and further in view of Nagae et al., claims 3, 11 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eguchi, Hasegawa et al., and Nagae et al., and further in view of Son et al., claims 7-8, 13-14 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Eguchi, Hasegawa et al., and Nagae et al., and further in view of Kanbe et al. Applicants respectfully traverse the rejections of claims under 35 U.S.C. § 103(a) for at least the following reasons.

Independent claims 1 and 16, as amended, both recite a liquid crystal display including, in part, “polarizers mounted on external surfaces of the upper and lower plates respectively, wherein a tilted long axis of the liquid crystal is coincident with a transmission axis of at least one of the polarizers, wherein the liquid crystal is a ferroelectric liquid crystal of Half V-Switching mode.” Similarly, independent claims 9 and 15, as amended, both recite a fabricating method of a liquid crystal display including, in part, “mounting polarizers on external surfaces of the upper and lower plates respectively, wherein a tilted long axis of the liquid crystal is coincident with a transmission axis of at least one of the polarizers, wherein the liquid crystal is a ferroelectric liquid crystal of

Half V-Switching mode.” Applicants respectfully submit that at least these features of amended independent claims 1, 9, 15, and 16 are neither taught nor suggested by Eguchi, Hasegawa et al., Nagae et al., and Son et al., whether taken singly or combined. Here, Applicants have amended claims 1, 9, 15, and 16 to incorporate the features of previously presented dependent claims 3, 11, 18, respectively.

In further relying upon Son et al. to reject dependent claims 3, 11, and 18, the Final Office Action implicitly admits that Eguchi, Hasegawa et al., Nagae et al. do not teach or suggest the use of a “Half V-switching mode.” However, the Office Action at page 6 alleges that Son et al. teaches the limitation such as “the liquid crystal is a ferroelectric liquid crystal of Half V-switching mode.” The Office Action further asserts that based on the teachings of Son et al. at col. 1, lines 30-44, and FIG. 5, it would have been obvious to those skilled in the art at time the invention was made to use ferroelectric liquid crystal of half V-switching mode for enhancing the contrast ratio and driving the liquid crystal easily. Applicants respectfully disagree.

Applicants respectfully submit that the liquid crystal display device of Eguchi is designed specifically to solve the problems (col. 13, lines 22-31) arising from using the ferroelectric liquid crystal, such as occurrence of a reverse electric field V_{rev} caused by the presence of spontaneous polarization of a ferroelectric, an after-image phenomenon during display caused by the V_{rev} , or a hysteresis phenomenon during switching, by disposing a polymeric ion-conductive film between an (organic electroconductive) alignment film and an electrode. Specifically, this requires the device of Eguchi to be a non-Half V-switching mode ferroelectric liquid crystal. Since the

preferred embodiments of Eguchi are intended to solve problems that are specific to the non-Half V-switching mode ferroelectric liquid crystal, Applicants respectfully assert that the non-Half V-switching mode ferroelectric liquid crystal is an essential feature of Eguchi. Accordingly, Applicants respectfully allege that it would be contrary to the teaching of Eguchi to replace the non-Half V-switching mode ferroelectric liquid crystal with the “ferroelectric liquid crystal of Half V-Switching mode.” Thus, Applicants respectfully submit that there would be no motivation for one of ordinary skill in the art to modify the device of Eguchi to have the Half V-switching mode of Son et al. Therefore the rejection of amended independent claims 1, 9, 15, and 16 (now incorporating the features of previously presented dependent claims 3, 11, and 18) are improper and should be withdrawn.

In addition, Applicants respectfully submits that none of cited references, Hasegawa et al., and Nagae et al. teach the liquid crystal display device having the features of “polarizers mounted on external surfaces of the upper and lower plates respectively, wherein a tilted long axis of the liquid crystal is coincident with a transmission axis of at least one of the polarizers, wherein the liquid crystal is a ferroelectric liquid crystal of Half V-Switching mode.” Furthermore, Applicants respectfully submit that Hasegawa et al. fails to cure the deficiencies of Eguchi. Moreover, Nagae et al. does not cure the deficiencies of Hasegawa et al., thus, Nagae et al. and Hasegawa et al. in combination do not cure the deficiencies of Eguchi. Furthermore, Son et al. also fails to cure the deficiencies of Eguchi, Hasegawa et al., and Nagae et al.

Applicants respectfully note that Kanbe et al. is not relied upon by the Final Office Action with regard to any of the features discussed above. In addition, Applicants respectfully assert that Kanbe et al. cannot remedy the deficiencies discussed above. Accordingly, Applicants respectfully asserts that none of the cited prior arts, whether taken singly or combined, teach or suggest at least the features of amended independent claims 1, 9, 15, and 16. Thus, in light of the arguments presented above, Applicants respectfully request that rejection of claims 1, 9, 15, and 16 under 35 U.S.C. §103(a) should be withdrawn. Moreover, Applicants respectfully assert that the rejections of dependent claims 4-8, 12-14, and 19-20 should also be withdrawn at least because of their dependencies from the respective amended independent claims 1, 9, 15, and 16.

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310.

ATTORNEY DOCKET NO.: 049128-5124

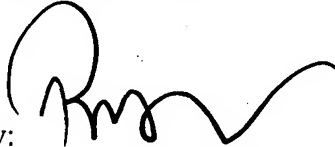
Application No.: 10/649,738

Page 14

If a fee is required for an extension of time under 37 C.F.R. 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

By: 
Robert J. Goodell
Reg. No. 41,040

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Customer No.: 009629

MORGAN, LEWIS & BOCKIUS LLP

1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Telephone: 202-739-7000
Facsimile: 202-739-3001